

ABSTRACT OF THE DISCLOSURE

A method of processing crude clay ore having a high grit content includes drying crude clay ore to remove moisture entrained therein, pulverizing the crude clay ore into individual mineral particles, and separating the individual mineral particles into respective product streams. Drying and pulverizing are performed substantially simultaneously by injecting crude clay ore into a heated air stream flowing through a dryer that has a plurality of rotating paddles and baffles therein. The air stream forces the crude clay ore through the plurality of rotating paddles and baffles to pulverize the crude clay ore into individual mineral particles. The individual mineral particles leaving the dryer are then separated into respective product streams by particle size via one or more conventional classification techniques.

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